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# FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For: Amite County Schools

Prepared By: Travis W. Stewart Miss. Forestry Commission

Time Period Covered by This Plan: 2012 - 2021

Date Plan Prepared: 2012-01-23

Plan Type: Stewardship / Stewardship

This plan was developed in accordance with the rules of the Stewardship program.

**Property Name: 1602N05E** 

## **TABLE OF CONTENTS**

LANDOWNER INFORMATION	3
FORESTER INFORMATION	3
INTRODUCTION	3
DISCLAIMER	3
OBJECTIVES	4
PROPERTY DESCRIPTION	4
GENERAL PROPERTY RECOMMENDATIONS	5
SOIL TYPES	6
STRATA	8
OTHER PLAN ACTIVITIES	. 12
STRATA ACTIVITY SCHEDULE	. 13

## LANDOWNER INFORMATION

Name: Amite County Schools

Mailing Address: P. O. Box 378
City, State, Zip: Liberty, MS 39645

Country: United States of America

Contact Numbers: Home Number:

Office Number: 601-657-4361

Fax Number:

E-mail Address:

Social Security Number (optional):

## FORESTER INFORMATION

Name: Travis W. Stewart, Forester

Forester Number: 02367

Organization: Miss. Forestry Commission

Street Address: P. O. Box 242 City, State, Zip: Liberty, MS 39645

Contact Numbers: Office Number: 601-657-8754

Fax Number: 601-657-9251

E-mail Address: tstewart@mfc.state.ms.us

#### PROPERTY LOCATION

County: Amite Total Acres: 660 Latitude: -90.71 Longitude: 31.14

Section: 16 Township: 2N Range: 5E

#### INTRODUCTION

This Forest Stewardship Management Plan will serve as a guide for accomplishing the goals and objectives for your property. In addition to addressing your specific goals and objectives, this plan includes recommendations for maintaining soil and water quality and protecting your forest from insects, disease, and wildfire. Recommendations are based on observation and assessment of the site.

#### **DISCLAIMER**

This information was derived from a small sampling of the forest resources. It reflects a statistical estimation that is only intended to be accurate enough for the purposes of making decisions for the short-term management of these resources. These estimations are temporally static. Events and circumstances may occur within the survey area that will physically alter the forest resources and therefore will not be reflected in this plan.

## **OBJECTIVES**

#### Timber Production

The goal is to produce high quality sawtimber. This will be accomplished through reforestation and timber stand improvement practices such as herbicide applications, prescribed burning, thinning at specified intervals, and other silvicultural practices. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

## Wildlife Management - General

The goal is to provide a diversity of habitats suitable for a variety of game and non-game wildlife species. Habitat management will focus on developing a variety of food, cover, water, and space. This will be accomplished by establishing and maintaining access roads and firelanes, providing openings within the forest, and the management of trees located within the Streamside Management Zone

#### PROPERTY DESCRIPTION

## General Property Information

This section lies six miles east of Liberty on the Patterson Road and contains 660 acres with 612 acres being forest land.

#### Water Resources

No perennial water resources were identified during a reconnaissance of the property. However, intermittent streams and drains identified will be managed in accordance with Mississippi's Best Management Practices.

#### Timber Production

The goal is to maximize the production of high quality timber. This will be accomplished through the application of timely thinning and other silvicultural practices designed to enhance timber quality and growth. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

## Threatened and Endangered Species

No threatened and endangered species were identified during the reconnaissance and evaluation of your property.

#### *Interaction with Surrounding Property*

Prescribed practices should be carried out in a manner that will minimize adverse impacts on surrounding properties. Consideration should be given to potential air, water, visual, and other impacts. In addition, practices carried out should have positive effects on the surrounding community such as improved wildlife habitat and soil stabilization.

#### Soils General

Soils were evaluated on the property to determine the suitability of the site for the proposed activities. Forest practices were planned so as to minimize erosion or other adverse effects on the soil. The following soils are identified for this property: Gillsburg, Collins, Providence, Ariel, Ruston, Saffell, Bude, Peoria, Smithdale

#### Archeological or Cultural Resources

These areas can range from churches, old cemeteries or Indian mounds to old home sites or other areas of historical significance.

No Archeological or Cultural resources were identified during a reconnaissance of the property. However, if Archeological or Cultural resources are discovered anytime on the property special managements measures will be applied immediately in order preserve these sensitive areas.

### GENERAL PROPERTY RECOMMENDATIONS

#### Forest Protection

A healthy vigorously growing stand is the best defense to an attack from a variety of forest insects, plants and pathogens.

## Insects and Diseases

Trees are subject to attack from insects and diseases. Different insects and diseases affect trees according to the age, species, and condition of the trees. Planted stands of pines and pure stands of hardwoods are particularly susceptible to attack. Since there are many different insects and diseases, no attempt will be made here to explain all of them. The property should be inspected at least annually for possible signs of insect and disease activity. Some things to look for are:

- Unseasonable leaf fall
- Discoloration of leaves or needles
- Pitch pockets on pine trees
- Heavy defoliation of hardwood leaves
- Groups of three or more dying trees within a stand

This list does not cover all instances of insect or disease attacks. If anything unusual is noticed, report it to a forester. In most cases, insect and disease problems can be controlled if discovered early.

#### Fire Protection

Your forest should be protected from wildfire at all times. The best way to protect your investment is by establishing and maintaining firebreaks around the property. Guidelines for establishment and maintenance of firebreaks may be found in Mississippi Forestry Commission publication #107, *Mississippi's Best Management Practices*.

#### Grazing

Tree seedlings should be protected from grazing until such time as the terminal bud of the sapling is beyond reach of livestock. Domestic livestock should be denied access to the tree planting area.

#### **Boundary Lines**

It is the responsibility of the landowner to ensure that all property lines and boundaries designating areas to receive forestry work are clearly identified and visible to all contractors.

**Note:** Some forest practices may cause temporary adverse environmental or aesthetic impacts. These practices will only cause short-term adverse impacts where they are installed. Special efforts will be made to minimize adverse effects when carrying out any of the practices. Examples include: site preparation, planting, prescribed fires, firebreak installation and maintenance, road installation and maintenance, pesticide applications and timber harvesting.

#### Wildlife Management General

The goal is to provide a diversity of habitats suited for a variety of game and non-game wildlife species. Habitat management will focus on providing a variety of food, cover, water, and space. This will be accomplished, in part, by establishing and maintaining access roads and firelanes, providing openings within the forest, and leaving mast producing and den trees.

#### Timber Management

Timber management goals for this property are to manage timber resources in such a manner as to maximize timber production throughout the life of the stand.

#### SOIL TYPES

#### Gillsburg

The Gillsburg component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of silty alluvium deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. Loblolly Site Index = 90.

#### Collins

The Collins component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of silty alluvium deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high.

Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 42 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

#### Providence

The Providence component makes up 90 percent of the map unit. Slopes are 2 to 8 percent. This component is on uplands. The parent material consists of silty loess over sandy marine deposits. Depth to a root restrictive layer, fragipan, is 18 to 38 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. Loblolly Site Index = 87. Longleaf Site Index = 73.

#### Ariel

The Ariel component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of silty alluvium deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. Loblolly Site Index = 95.

#### Ruston

The Ruston component makes up 90 percent of the map unit. Slopes are 0 to 8 percent. This component is on coastal plains. The parent material consists of loamy fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria. Loblolly Site Index = 91. Longleaf Site Index = 76. Slash Site Index = 91.

#### Saffell

The Saffell component makes up 90 percent of the map unit. Slopes are 8 to 30 percent. This component is on hillslopes on hills. The parent material consists of gravelly alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

#### Bude

The Bude component makes up 95 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 18 to 40 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 11 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. Loblolly Site Index = 90.

#### Peoria

The Peoria component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of silty alluvium deposits. Depth to a root restrictive layer, natric, is 24 to 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 15 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. Loblolly Site Index = 83.

#### Smithdale

The Smithdale component makes up 90 percent of the map unit. Slopes are 8 to 12 percent. This component is on hillslopes. The parent material consists of loamy fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. Loblolly Site Index = 86. Longleaf Site Index = 69. Slash Site Index = 85.

#### **STRATA**

Strata 1 - Stands 11, 13, 19 Stand Description 127.24 Acres

Stands 11 (4.84 ac), 13 (3.3 ac), 19 (119.1 ac)

This strata consists of mixed pine and hardwood sawtimber. The understory consists of hardwood underbrush about 8 feet high. The strata is estimated to be approximately 62 years old with an average of 138 trees per acre.

#### Strata Recommendations

This strata will be maintained until the final harvest planned for 2014. The strata will then be chemically site prepped and planted with 2nd generation loblolly pines.

#### **Activity Recommendations**

Harvest

This strata will be final harvested in 2014.

#### Site Preparation

In 2015, an aerial application of herbicide will be applied following the harvest. The type of chemical and rates of application will be determined following the timber harvest.

#### Regeneration

In 2015, this strata will be regenerated with genetically improved loblolly pine seedlings. Containerized seedlings will be used if available and will be planted on a 8 x 10 spacing.

Strata 2 - Stands 6, 15, 20, 21, 22 Stand Description 161.90 Acres

Stands 6 (61.26 ac), 15 (17.29 ac), 20 (66.44 ac), 21 (10.39 ac), 22 (6.52 ac)

This strata consist of sub-merchantable pine plantation. This plantation was planted in January/February of 2006. There are approximately 600 trees per acre in these plantations. These stands are well drained, and they could be logged 8 to 10 months of the year. Accessibility to the stand is good.

## Stand Recommendations

A first thinning is scheduled in 2021. Every fourth row will be removed with thinning to take place in the remaining rows. It will focus on removing poor quality, diseased, or poor formed trees. Residual stocking will be 70 square feet per acre.

A prescribed burn can be implemented to improve wildlife browse, reduce hardwood brush, and reduce widlfire danger. An understory of hardwood saplings and privet hedge could become a problem in this stand. This is a problem that would diminish the quality of forage available for wildlife, as well as, diminishing the quality of wildlife habitat and forest health. In the future, the stand may need to be chemically sprayed to control such species, or a prescribed burn could be implemented. Optimally both practices could be used. If the combination is used, the burn should be implemented on a 2 to 3 years rotation after the spraying is completed. This will restore a more healthy wildlife habitat and forest. The prescribed burn will help control the unwanted understory vegetation.

The burn will also allow more sunlight to reach the ground, spurring growth of new forage for wildlife species. All roads and firelanes should be maintained annually, and the stand should be grown to a 35 year rotation.

#### **Activity Recommendations**

Harvest

A first thinning is scheduled in 2021. Every fourth row will be removed with thinning to take place in the remaining rows. It will focus on removing poor quality, diseased, or poor formed trees. Residual stocking will be 70 square feet per acre.

Strata 3 - Stands 2, 3, 7, 8, 16 Stand Description 42.47 Acres

Stands 2 (3.44 ac), 3 (11.95 ac), 7 (2.96 ac), 8 (1.81 ac), 16 (22.31 ac)

This strata consists of mature hardwood sawtimber. The understory consists of hardwood underbrush about 8 feet high. The strata is estimated to be approximately 62 years old with an average of 125 trees per acre.

#### **Stand Recommendations**

There are no planned activities during the period of this management plan. This strata will remain in hardwood and follow Best Management Practices. Some thinning out of pine trees could take place during harvest activities of adjacent stands.

Strata 4 - Stands 18, 1 Stand Description 119.47 Acres

Stands 18 (19.44 ac), 1 (100.03 ac)

This strata consists of mixed pine and hardwood sawtimber. The understory consists of hardwood underbrush about 8 feet high. The strata is estimated to be approximately 62 years old with an average of 190 trees per acre.

#### Strata Recommendations

This strata will be maintained until the final harvest planned for 2020. The strata will then be chemically site prepped and planted with 2nd generation loblolly pines.

#### **Activity Recommendations**

Harvest

This strata will be final harvested in 2020.

#### Site Preparation

In 2021, an aerial application of herbicide will be applied following the harvest. The type of chemical and rates of application will be determined following the timber harvest.

#### Regeneration

In 2021, this strata will be regenerated with genetically improved loblolly pine seedlings. Containerized seedlings will be used if available and will be planted on a 8 x 10 spacing.

Strata 5 - Stands 4, 5, 10, 12, 14 Strata Description 161.22 Acres

Stands 4 (4.2 ac), 5 (60.15 ac), 10 (11.03 ac), 12 (1.79 ac), 14 (84.05 ac)

This strata consist of machine planted pine plantation that was thinned in 2010. The stand was planted in 1985. The stand basal area is currently about 80 square feet per acre with 157 trees per acre.

#### Stand Recommendations

A second thinning is scheduled in 2016. Thinning will take place in the remaining rows. It will focus on removing poor quality, diseased, or poor formed trees. Residual stocking will be 70 square feet per acre.

A prescribed burn can be implemented to improve wildlife browse, reduce hardwood brush, and reduce widlfire danger. An understory of hardwood saplings and privet hedge could become a problem in this stand. This is a problem that would diminish the quality of forage available for wildlife, as well as, diminishing the quality of wildlife habitat and forest health. In the future, the stand may need to be chemically sprayed to control such species, or a prescribed burn could be implemented. Optimally both practices could be used. If the combination is used, the burn should be implemented on a 2 to 3 years rotation after the spraying is completed. This will restore a more healthy wildlife habitat and forest. The prescribed burn will help control the unwanted understory vegetation. The burn will also allow more sunlight to reach the ground, spurring growth of new forage for wildlife species. All roads and firelanes should be maintained annually, and the stand should be grown to a 35 year rotation.

#### **Activity Recommendations**

#### Harvest

This strata will have a second thinning in 2016. It will focus on removing poor quality, diseased, or poor formed trees. This thin will be based on single tree selection, and will bring the basal area down to approximately 70 square feet.

## OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

The boundary lines are being established and maintained to protect school board property from tresspass.

## Line Recommendations

Once established, the boundary lines will need to be maintained on a 5 to 6 year rotation. Boundary lines will be surveyed in 2014 and repainted in 2019. Some boundary lines need to be resurveyed when an active timber sale is planned on that property line.

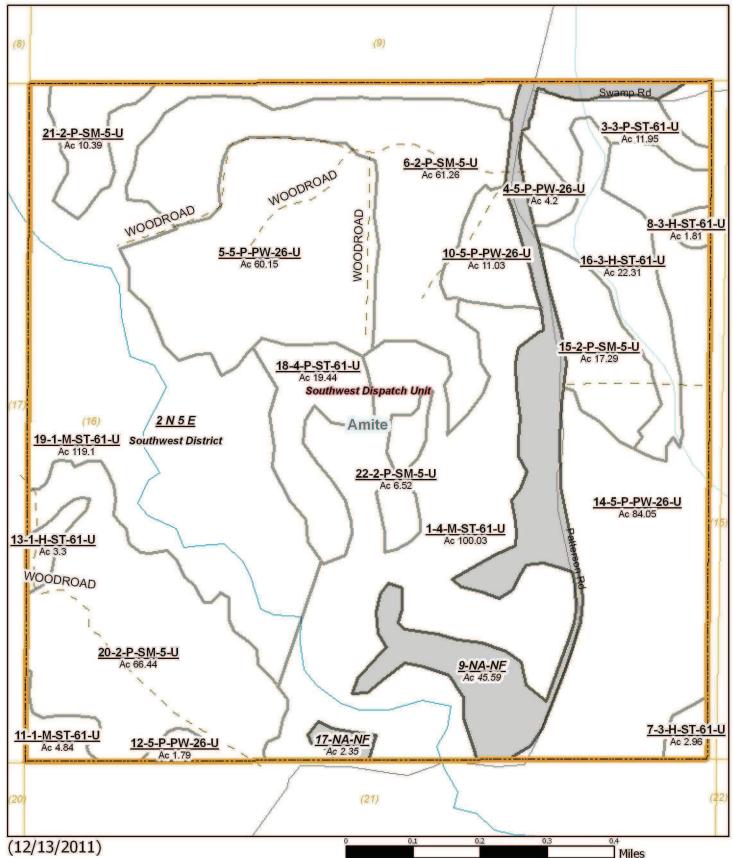
**Activity Recommendations** 



## **Amite County Schools**

S16, 2N-5E 2011 to 2021 660.23 Acres +/-



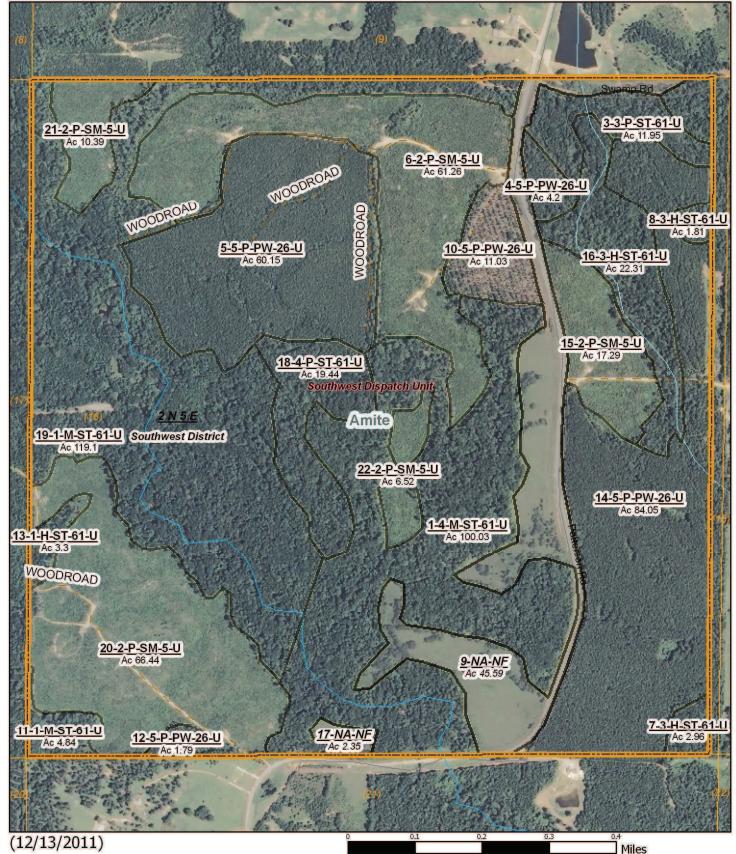




## **Amite County Schools**

S16, 2N-5E 2011 to 2021 660.23 Acres +/-





## AMITE COUNTY SCHOOLS \$16, 2N-5E



#### Property

Property

#### Category 1: Stands

Clear Cut

Non-Stocked

Reproduction

Sub-Merchantable

Pulpwood

Chip-n-Saw

Sawtimber

Poles

#### Category 3: Non-Forest Stands

Non-Forest

#### Structures

Barn

Tractor Shed

**Out Building** 

Single-Family

Multi-Family

Camp House

Club House Office Building

Manufacturing

Warehouse Chicken House

Horse Stall

Milking Parlor

-Hog Pen

Blind

Stand

H Hospital

Nursing Home

Dr. Clinic

H State Facility

#### Structures (cont)

Office

Work Center

Materials Depot

Prison

School

☆ Church Mosque

Synagogue

Other

#### Property Roads/Trails

**Drive Ways** 

Access Road

Logging Road

Skid Trail

Farm Road

Hiking Trail

Horseback Riding Trail

#### **Boundary Lines**

Archeology

Cemetery

**Drilling Sites** 

Education

Forest Health

**Invasive Species** 

Management Compartment

Military Area

Natural Area

Property

Recreation Rights of Way

SMZ

Special Use

Stand

Surface Mining

#### Boundary Lines (cont)

Threatened/Endangered Species

Visual Buffer

#### Transportation (Lines)

City Streets

County Roads

3 Digit Highway

Interstate Highway

**US Highway** 

State Highway

Natchez Trace Parkway

Runways/Airports

Active RR

Abandoned RR

#### Hydrology (Lines)

Mississippi River

Major River

**Primary Stream** 

**Intermittent Stream** 

Canal

Ditch

Earthen Dam

Concrete Dam

#### Utilities (Lines)

Large Electrical

Local Utility

Large Pipeline

Small Pipeline

Gas Line

Utility Line Water Line

## Stand Activity Summary for Amite County Schools 16 2N 5E

Filters Applied: County: Amite

Client Class: School Trust Land
District: Southwest District
Client: Amite County Schools

STR: 16 2N 5E

Activity:

Year: 2012 Through 2021

STR	Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2014						
16 2N 5E	1	11	Harvest, Mechanical, Regeneration, Machine, Loblolly	5	\$169.40	\$4,143.04
16 2N 5E	1	13	Harvest, Mechanical, Regeneration, Machine, Loblolly	3	\$105.00	\$1,035.00
16 2N 5E	1	19	Harvest, Mechanical, Regeneration, Machine, Loblolly	119	\$4,165.00	\$101,864.00
			Yearly Totals	127	\$4.439.40	\$107.042.04
2015						
16 2N 5E	1	11	Site Preparation, Chemical, Broadcast, Aerial, Woody	5	\$484.00	\$0.00
16 2N 5E	1	11	Regeneration, Artificial, Plant, Hand, Loblolly	5	\$484.00	\$0.00
16 2N 5E	1	13	Site Preparation, Chemical, Broadcast, Hand, Combination	3	\$300.00	\$0.00
16 2N 5E	1	13	Regeneration, Artificial, Plant, Hand, Loblolly	3	\$300.00	\$0.00
16 2N 5E	1	19	Site Preparation, Chemical, Broadcast, Aerial, Woody	119	\$11,900.00	\$0.00
16 2N 5E	1	19	Regeneration, Artificial, Plant, Hand, Loblolly	119	\$11,900.00	\$0.00
		,	Yearly Totals	254	\$25,368.00	\$0.00
2016						
16 2N 5E	5	4	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	4	\$147.00	\$1,218.00
16 2N 5E	5	5	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	60	\$2,100.00	\$17,400.00
16 2N 5E	5	10	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	11	\$386.05	\$3,198.70
16 2N 5E	5	12	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	2	\$62.65	\$519.10
16 2N 5E	5	14	Harvest, Mechanical, 2nd Thin, Machine, Loblolly	84	\$2,941.75	\$24,374.50

STR	Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue			
			Yearly Totals	161	\$5,637.45	\$46,710.30			
2020									
16 2N 5E	4	1	Harvest, Mechanical, Regeneration, Machine, Loblolly	100	\$3,500.00	\$85,600.00			
16 2N 5E	4	18	Harvest, Mechanical, Regeneration, Machine, Loblolly	19	\$665.00	\$30,913.00			
			Yearly Totals	119	\$4.165.00	\$116.513.00			
2021									
16 2N 5E	2	6	Harvest, Mechanical, 1st Thin, Machine, Loblolly	61	\$2,144.10	\$16,540.20			
16 2N 5E	2	15	Harvest, Mechanical, 1st Thin, Machine, Loblolly	17	\$605.15	\$4,668.30			
16 2N 5E	2	20	Harvest, Mechanical, 1st Thin, Machine, Loblolly	66	\$2,310.00	\$17,820.00			
16 2N 5E	2	21	Harvest, Mechanical, 1st Thin, Machine, Loblolly	10	\$363.65	\$2,805.30			
16 2N 5E	2	22	Harvest, Mechanical, 1st Thin, Machine, Loblolly	7	\$228.20	\$1,760.40			
16 2N 5E	4	1	Site Preparation, Chemical, Broadcast, Aerial, Combination	100	\$10,000.00	\$0.00			
16 2N 5E	4	1	Regeneration, Artificial, Plant, Hand, Loblolly	100	\$10,000.00	\$0.00			
16 2N 5E	4	18	Regeneration, Artificial, Plant, Hand, Loblolly	19	\$1,900.00	\$0.00			
16 2N 5E	4	18	Site Preparation, Chemical, Broadcast, Aerial, Woody	19	\$1,900.00	\$0.00			
			Yearly Totals	399	\$29.451.10	\$43.594.20			
			Grand Totals	1.060	\$69.060.95	\$313,859.54			